

WHAT IS CLAIMED IS:

- 1 1. A device used to hold and position a blood vessel in the performance
2 of a coronary artery bypass graft procedure, comprising:
3 a handle;
4 a collar coupled to the handle, the collar adapted to substantially
5 encircle a blood vessel, the collar having a number of suction apertures; and
6 a vacuum port adapted to be coupled to a vacuum source, the vacuum
7 port communicating a suction to the suction apertures to hold the blood vessel.
- 1 2. The device of claim 1, wherein the collar is comprised of two collar
2 halves that together form a cylinder.
- 1 3. The device of claim 2, further comprising a ring encircling the collar
2 halves to attach the collar halves together.
- 1 4. The device of claim 1, wherein the collar is sized to hold an internal
2 mammary artery.
- 1 5. The device of claim 1, wherein the blood vessel is a graft vessel.
- 1 6. The device of claim 1, wherein the collar has a plurality of suction
2 apertures and the suction apertures are circular.
- 1 7. The device of claim 1, wherein the handle is malleable.
- 1 8. The device of claim 1, further comprising a vacuum line adapted to
2 couple the vacuum port to the vacuum source.
- 1 9. The device of claim 8, wherein the vacuum line is incorporated into the
2 handle.

1 10. A conduit positioning system for use in the performance of a surgical
2 technique on a patient, comprising:

3 a collar adapted to substantially encircle a conduit in the patient, the
4 collar having a number of suction apertures;

5 a vacuum line coupled to the suction apertures;

6 a vacuum source coupled to the vacuum line to create a suction at the
7 suction apertures to hold the conduit; and

8 a handle coupled to the attachment head.

1 11. The conduit positioning system of claim 10, wherein the collar is
2 comprised of two collar halves that together form a cylinder.

1 12. The conduit positioning system of claim 11, further comprising a ring
2 encircling the collar halves to attach the collar halves together.

1 13. The conduit positioning system of claim 10, wherein the collar is sized
2 to hold an internal mammary artery.

1 14. The conduit positioning system of claim 10, wherein the conduit is a
2 blood vessel.

1 15. The conduit positioning system of claim 10, wherein the collar has a
2 plurality of suction apertures and the suction apertures are circular.

1 16. The conduit positioning system of claim 10, wherein the handle is
2 malleable.

1 17. The conduit positioning system of claim 10, wherein the vacuum line
2 is incorporated into the handle.

1 18. A method of performing coronary artery bypass grafting surgery,
2 comprising:

3 creating an opening in a patient to access the heart of the patient;

4 harvesting a blood vessel from the patient for use as a graft vessel;
5 providing a vessel holding and positioning device, the vessel holding
6 and positioning device having a collar adapted to substantially encircle the blood
7 vessel, the collar having a number of suction apertures adapted to engage the blood
8 vessel;
9 providing a vacuum source coupled to the collar to create a suction at
10 the suction apertures;
11 inserting the blood vessel into the collar;
12 holding the blood vessel with the suction apertures;
13 positioning an end of the blood vessel with the vessel holding and
14 positioning device at an anastomosis site on a second blood vessel;
15 coupling the end of the blood vessel to the second blood vessel to
16 create an anastomosis;
17 removing the collar from the blood vessel; and
18 closing the opening in the patient.

1 19. The method of claim 18, wherein the blood vessel is an internal
2 mammary artery or a greater saphenous vein.

1 20. The method of claim 19, wherein the collar comprises a plurality of
2 wall portions coupled together with a ring and wherein the removing step comprises
3 cutting the ring to remove the wall portions from around the blood vessel.

1 21. The method of claim 18, further comprising stopping the heart before
2 creating the anastomosis.

1 22. The method of claim 18, wherein the opening is a median sternotomy,
2 a mini-sternotomy, or a left anterior thoracotomy.

1 23. The method of claim 18, wherein the opening is an endoscopic port.

1 24. A blood vessel positioning device for use in cardiac surgery,
2 comprising:
3 a handle; and

4 a first collar and a second collar coupled to the handle, the second
5 collar separated from the first collar by a first distance, each collar adapted to
6 substantially encircle a blood vessel and having a number of suction apertures,
7 wherein the suction apertures are adapted to engage and hold the blood vessel.

1 25. The blood vessel positioning device of claim 24, wherein the handle
2 comprises a first prong and a second prong, the first prong attached to the first collar
3 and the second prong attached to the second collar.

1 26. The blood vessel positioning device of claim 24, wherein the first and
2 second prongs are malleable whereby the distance may be changed.

1 27. The blood vessel positioning device of claim 24, wherein the collars
2 are sized to encircle an internal mammary artery.

1 28. The blood vessel positioning device of claim 24, further comprising a
2 vacuum source coupled to the suction apertures.

1 29. The blood vessel positioning device of claim 24, further comprising a
2 vacuum line coupling the vacuum source to the first and second collars.

1 30. The blood vessel positioning device of claim 29, wherein the vacuum
2 line is incorporated into the handle.

1 31. The blood vessel positioning device of claim 24, wherein each collar
2 has a plurality of suction apertures and the suction apertures are circular.

1 32. A method of creating an arteriotomy in a blood vessel, comprising:
2 creating an opening in a patient to access a selected blood vessel in
3 which to create the arteriotomy;

4 providing a vessel holding and positioning device, the vessel holding
5 and positioning device having at least two collars with a gap between one another,
6 each collar adapted to substantially encircle the blood vessel, the collars each having a
7 number of suction apertures adapted to engage the blood vessel;

8 providing a vacuum source coupled to the collars to create a suction at
9 the suction apertures;
10 inserting the blood vessel into the collars;
11 holding the blood vessel with the suction apertures, an exposed portion
12 of the blood vessel residing in the gap; and
13 creating an arteriotomy in the exposed portion of the blood vessel.

1 33. The method of claim 32, wherein the vacuum source is coupled to the
2 collars via a vacuum line incorporated into the handle.

1 34. The method of claim 33, wherein the blood vessel is an internal
2 mammary artery.

1 35. The method of claim 32, wherein the opening is a median sternotomy,
2 a mini-sternotomy, or a left anterior thoracotomy.

1 36. The method of claim 32, wherein the opening is an endoscopic port.

1 37. The method of claim 32, further comprising attaching a second blood
2 vessel to the arteriotomy to create an anastomosis.